



INVESTOR IN PEOPLE

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**Your Reference:** EJG/GBP89951  
**Application No:** GB0407153.6

9 August 2004

Dear Sirs

**Patents Act 1977:  
Combined Search and Examination Report under Sections 17 and 18(3)**

**Latest date for reply:**

**19 December 2005**

I enclose two copies of my search and examination report and two copies of the citations.

By the above date you should either file amendments to meet the objections in the report or make observations on them. If you do not, the application may be refused.

**Other search results**

If you have applied to another patent office for a patent for this invention you will be receiving from them the results of their search. If you decide to proceed with the present application you are asked to provide me with a copy of any such official search report; or to email identifying details of the cited documents (including any category assigned in the report) to the email address above.

*Cut-off date* This request applies to search reports that you have received before the date when you send a response to our first examination report under section 18(3) or section 18(4); if you make no response to an initial section 18(4) report the cut-off date is two months after the date of that report. Tell us about a search report sooner rather than later if that would allow it to be considered during our first examination.

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<sup>†</sup>Use of E-mail: Please note that e-mail should be used for correspondence only.



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**Exceptions** You do not have to supply details of a search report that (1) shows a nil response, or (2) has been published by WIPO or EPO, or (3) you have already supplied to us on a previous GB application.

### **Publication**

I estimate that, provided you have met all the formal requirements, preparations for publication of your application will be completed soon after **10 May 2005**. At this time you will receive a letter confirming the exact date when the preparations for publication will be completed. This letter will also tell you the publication number and date of publication of your application.

### **Withdrawal/amendment**

If you wish to withdraw your application before it is published you must do so before the preparations for publication are complete. **WARNING** – after preparations for publication are complete it will NOT be possible to withdraw your application from publication.

If you wish to file amended claims for inclusion with the published application you must do so before the preparations for publication are completed. If you write to the Office less than 3 weeks before 10 May 2005 please mark your letter prominently:

**"URGENT - PUBLICATION IMMINENT"**.

Yours faithfully

Chris Vosper  
Examiner

### **Important information about combined search and examination**

I also ask that you take note of the following points. These might have a bearing on the future stages of your application because the examination report has been sent to you before your application has been published.

- (a) You may file voluntary amendments before making a full response to my examination report. We will publish with your application any new or amended claims you file voluntarily or as a full response, provided that they are received before preparations for publication are completed. It would help us when you file amendments before publication if you could **prominently indicate** in a covering letter whether or not the amendments are intended as a full response to the examination report.



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- (b) If you file a full response to the examination report before your application is published I will consider it as soon as possible. However, if this would disrupt the publication of your application, I would have to delay taking any action until the application had been published. This delay could be up to 3 months, depending upon when we receive your response.
- (c) There is another situation when there might be a delay between you filing a full response and the Patent Office responding to it. This would arise if you met all my objections but your application had not or had only recently been published. I could not report the outcome of my re-examination until I was satisfied that the search was complete for documents published before the priority date of your invention and that anybody interested in the application has had three months following publication of the application to make observations on the patentability of your invention.
- (d) Provided that the requirements of the Act have been met, I can send your application to grant as early as three months after publication. Before doing so I will bring the original search up to date and raise with you any further objection that might result from this top-up search. However, there is a possibility that at that time I may not have access to all the patent applications published after the priority date of your invention and of possible relevance to your application. If this is the case I would have to complete the search after grant and if necessary raise any new found novelty objection then.



Application No: GB0407153.6

Examiner: Chris Vosper

Claims searched: 1-8

Date of search: 6 August 2004

## Patents Act 1977: Search Report under Section 17

### Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular reference
X	1 and 4 at least	US 4676719 A UNITED (figs. 2 and 4, noting partitions 62,64)
X	1 and 4 at least	US 4664597 A UNITED (figs. 3 and 4, noting partitions defined by wall surfaces 68,70,52 between holes),
X	1 and 4 at least	US 4303374 A GENERAL (figs. 2 and 3, noting partitions 44)
X	1 and 4 at least	US 5660525 A GENERAL (figs. 3 and 7, noting pairs of holes with partition separating the holes in each pair)
X	1 and 4 at least	US 4672727 A UNITED (figs. 7 and 8, noting partitions defined by wall portions between holes)

### Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

### Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC<sup>w</sup> :

F1V

Worldwide search of patent documents classified in the following areas of the IPC<sup>07</sup>

F01D

The following online and other databases have been used in the preparation of this search report

ONLINE: EPODOC, JAPIO, WPI, OPTICS



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Industries Company Limited

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## Patents Act 1977

### Combined Search and Examination Report under Sections 17 & 18(3)

#### Clarity and consistency

1. The claims appear to contain a number of obscure, inconsistent or unsupported passages of which the following are mentioned in particular,
2. While claims 1 and 4 state that the partition extends from the outlet side of the cooling hole to the inlet side, this does not appear to be consistent with what is shown in figure 1, for example, in which the partition 19 does not appear to extend all the way from the outlet 17 to the inlet 15.
3. Claim 1 appears to imply that the compressed air is actually part of the component being claimed. Furthermore, it would appear that the flow of cooling air from a compressor reflects preferred use rather than features of the component, per se. Claim 4 also appears to require consideration in this respect.
4. It is not clear what constitutes "the bottom surface of the outlet side of the cooling hole" and "the outlet side of a bottom wall of the film cooling hole" in claims 1 and 4.
5. It is not clear, in claim 2, in what sense the partition wall is intended to be at a right angle to the expansion direction, since the shape of the opening, and consequently "the expansion direction", have not been defined.
6. There does not appear to be a proper antecedent for "the outlet opening" in line 10 of claim 4,
7. Since two "spurt out" openings are referred to in claim 4, with no indication of the respective alignments of their wedge shapes, it is not clear what constitutes "the expansion direction" in claim 5.
8. The statements of invention on pages 3 and 4 should be revised in accordance with any amendments to the claims.



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[Examination Report contd.]

### **Novelty or Inventive step**

9. Although your invention is not set out clearly, it seems that it might not be new or that it might be obvious in view of what is disclosed in the following documents:

US 4676719 A

UNITED (figs. 2 and 4, noting partitions 62,64)

US 4664597 A

UNITED (figs. 3 and 4, noting partitions defined by wall surfaces 68,70,52 between holes),

US 4303374 A

GENERAL (figs. 2 and 3, noting partitions 44)

US 5660525 A

GENERAL (figs. 3 and 7, noting pairs of holes with partition separating the holes in each pair)

US 4672727 A

UNITED (figs. 7 and 8, noting partitions defined by wall portions between holes)

10. You should consider these documents carefully when amending your specification. You are also advised that the last two documents are typical of a number of similar disclosures found.

### **Further search**

11. A further search may be necessary after you have amended the specification.